



GNSS
Centre of Excellence

Czech Republic

Prague, March 27, 2013



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I. Project Introduction

2012 +: the need to strengthen the activities of the Czech Republic in development, testing and deployment of GNSS applications

Cooperation between organizations of major modes of transport (air, railway, road) and industries

- Common and broad expert background
- Providing ideas for new systems to industrial partners
- Centralization of ongoing activities
- Initiation of new activities
- Making use of the local testing platforms: operating area of the Vaclav Havel Airport Prague, Test Center VUZ Velim (Railway test rings)



foundation

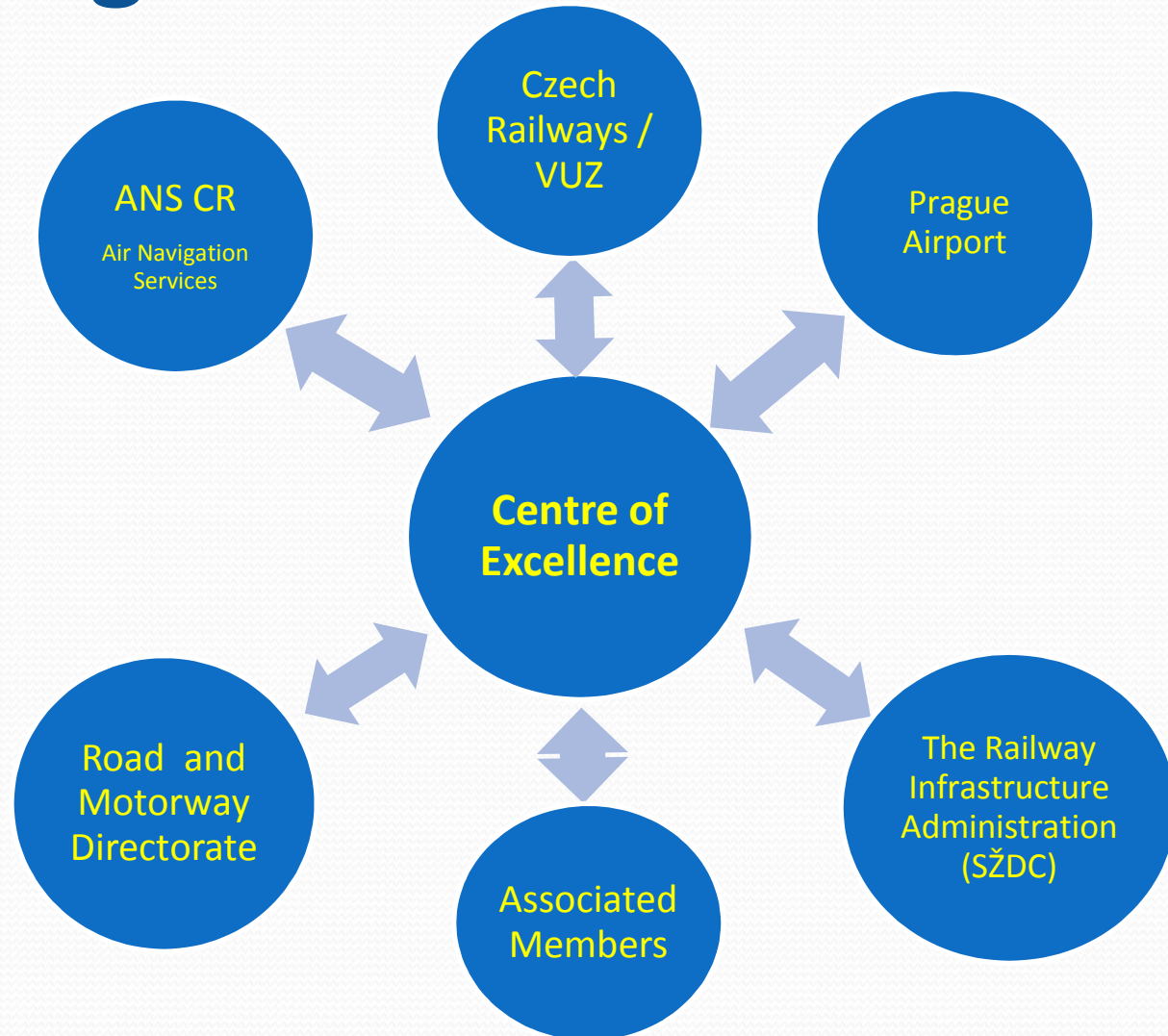
GNSS CENTRE OF EXCELLENCE



II. Objectives of the GNSS Centre

- To promote the development of GNSS applications in the Czech Republic via the cooperation of the Prague Airport, the Air Navigation Services of the Czech Republic (RLP - ANS CR), the Czech Railways (CD) and other entities in the sector of transport with Czech industry and the academic sphere
- To promote the image of the members of the association as innovative companies that develop and use modern technologies
- To accelerate the development and deployment of applications based on EGNOS and in the future GALILEO
- To support the activities of the GSA Agency in Prague

III. Organizational Chart



Supported by:



European GNSS Agency



Ministerstvo dopravy



IV. Services of the Centre

The GNSS Centre of Excellence will provide industrial partners with

- Database of GNSS applications and projects
- Suggestions for the development of new GNSS applications according to the needs of operation
- Specification of user requirements for new applications
- Sharing of the latest findings, trends and visions in the GNSS field
- Testing of applications
- Verification and validation
- Support and ensuring of the certification
- Support in marketing, sales and implementation
- Training in GNSS issues
- General consultancy in the GNSS area

V. Areas of Interest (1/3)

Offered Cooperation

Applications of Flight Operations

- Design and publication of GNSS approach procedures
- Assistance in testing new applications using Galileo pseudo-satellites
- Flight validation of GNSS approach procedures
- Ground and flight validation of the GNSS signal

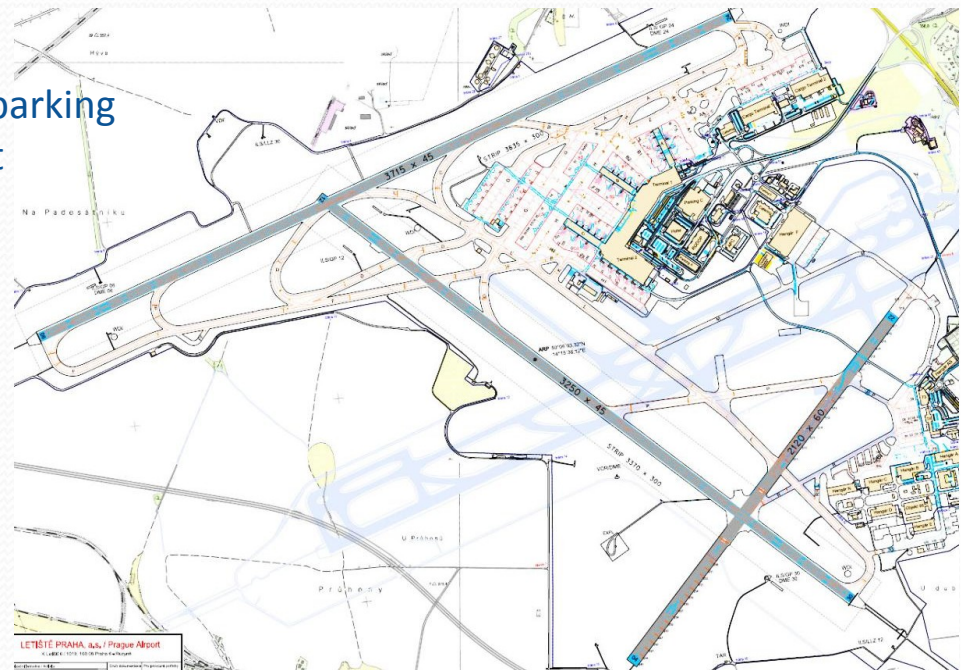


V. Areas of Interest (2/3)

Offered Cooperation

Applications for Airport Ground Operations

- Vehicle Onboard Guidance System
- Fleet Management in apron area
- Pavement Management Systems
- **Airfield Lighting Maintenance Systems**, management of **winter maintenance vehicles**
- **3D Geographical Information Systems** and geodetic applications
- Navigation for flight crew and automatic taxiing systems
- **ADS-B** for small and medium airports
- System for baggage tracking
- 3D navigation for passengers as assistance to parking and moving inside the terminal including flight and commercial information
- System **integration of all GNSS application**



V. Areas of Interest (3/3)

Demand for Partners

Applications in Railway Transport

- Systems for monitoring vehicles and operation management
- Energetic and fuel efficiency applications
- Applications for logistic (tracking objects on railway lines – engines, railway vehicles, containers, parcels etc.)
- Information systems
- Signalling and control systems
- Diagnostic systems
- Rescue systems (S&R services and communication in case of emergency)

Applications in Road Transport

- Geographical Information Systems and geodetic applications for supporting engineering and construction
- Applications for road management
- Applications for intelligent ITS



VI. Partners

Cooperating Organizations

- ANS CR
- Prague Airport
- Czech Railways (CD) / VUZ
- Road and Motorway Directorate of the Czech Republic (RSD)

Expected Additions

- The Railway Infrastructure Administration (SZDC)
- VUZ

Cooperation with industries and companies operating in the fields of GNSS applications, as well as with SME and other institutions in the transport sector.

Targeted Fields

- Air Traffic
 - Flight operations
 - Ground operations at airports
 - Safety, security
 - Maintenance & Avionics
 - Handling
 - General aviation
 - Logistics and transportation of dangerous goods
- Railway Traffic
 - Railway transport route
 - Passenger transport
 - Haulage
- Road Traffic

VII. Summary

The GNSS Centre of Excellence (GCE) was established to strengthen the activities of the Czech Republic in development, testing and deployment of GNSS applications.

In GCE organizations of major spheres of transport (air, railway, road) and industrial partners cooperate. This will create a common and broad expert background.

The Center's main activities will include cooperation and interaction of application users and industries: GCE will provide industrial partners primarily with ideas for new systems.

Furthermore there will be

- GNSS application and project database
- Specification of user requirements for new applications
- Testing of Applications
- Verification and Validation
- Support and ensuring of the certification
- Support in marketing, sales and implementation in the Czech Republic and abroad

The ongoing GNSS activities will be centralized and new ones will be initiated. GCE will strengthen technological companies developing GNSS applications and will attract new companies into the field, including small and medium-sized enterprises.

Contact



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